

(12) UK Patent Application (19) GB (11) 2 090 622 A

(21) Application No 8134238
(22) Date of filing 13 Nov 1981

(30) Priority data
(31) 8036458

(32) 13 Nov 1980

(33) United Kingdom (GB)

(43) Application published
14 Jul 1982

(51) INT CL³
A45F 1/02

(52) Domestic classification
E1D 154 2012 427 503 F
GS2

(56) Documents cited
GB 2044315A
GB 2043737A
GB 925673
GB 821439
GB 807081
GB 791695
GB 448129

(58) Field of search
E1D

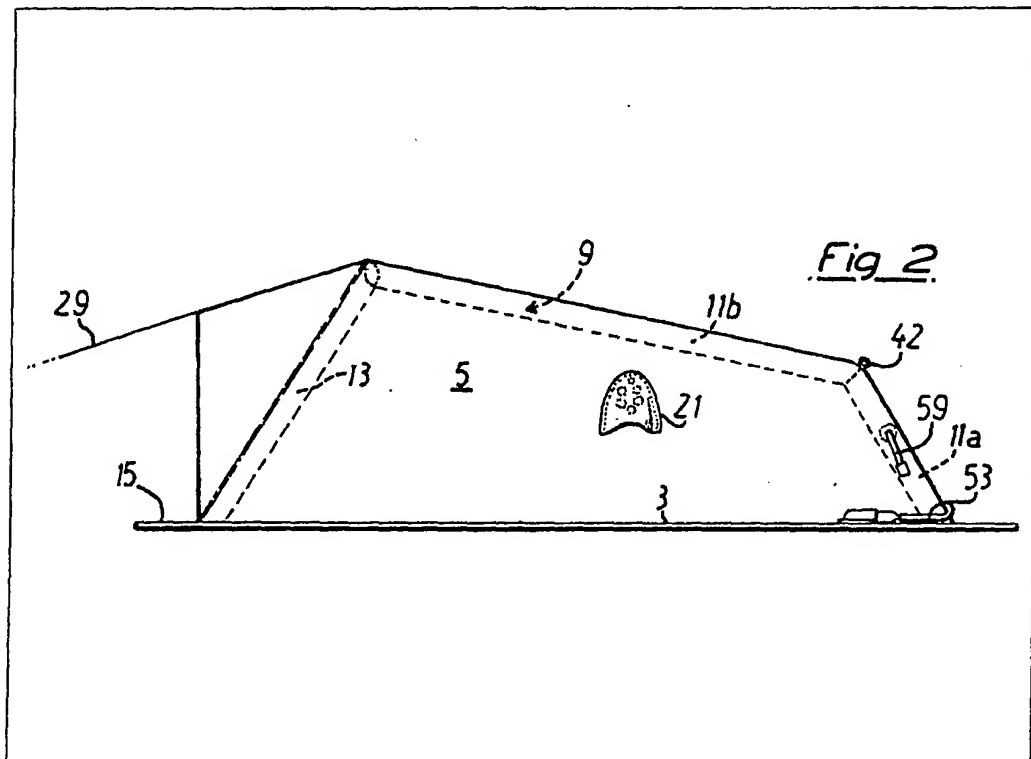
(71) Applicant
Mervyn Ellis Williams
(deceased),
6 Parker Avenue,
Hartford, Cheshire,
CW8 3AH

(72) Inventor
Mervyn Ellis Williams
(deceased)

(74) Agents
W. P. Thompson & Co.,
Coopers Building, Church
Street, Liverpool L1 3AB

(54) Emergency tent

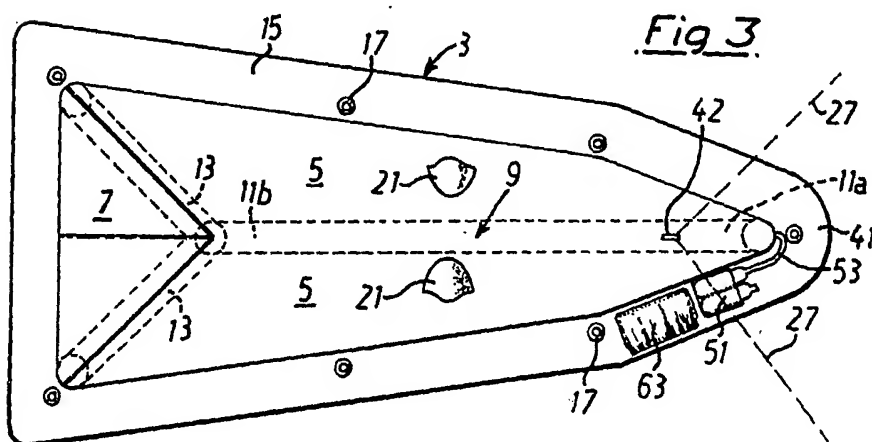
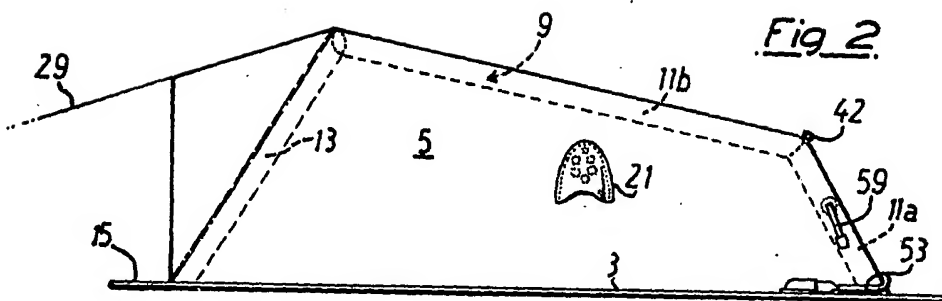
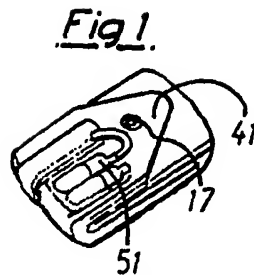
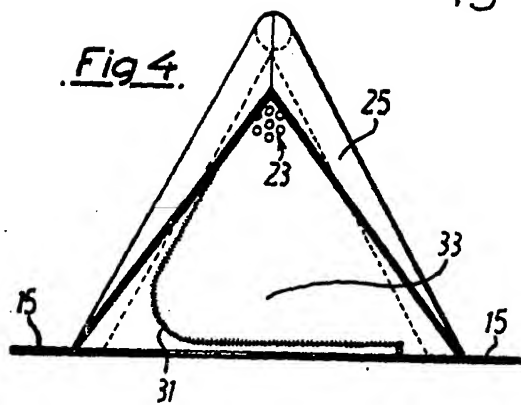
(57) A tent has a groundsheet (3) integral with side walls (5), a front wall (7), and an inflatable ridge beam (9), which has splayed leg portions (13) defining the front wall (7) of the tent. A projecting portion of the groundsheet forms an anchoring skirt (15). The beam (9) can be inflated manually via a pipe (59) or by a gas cylinder (51) carried in a pocket on the skirt (15).



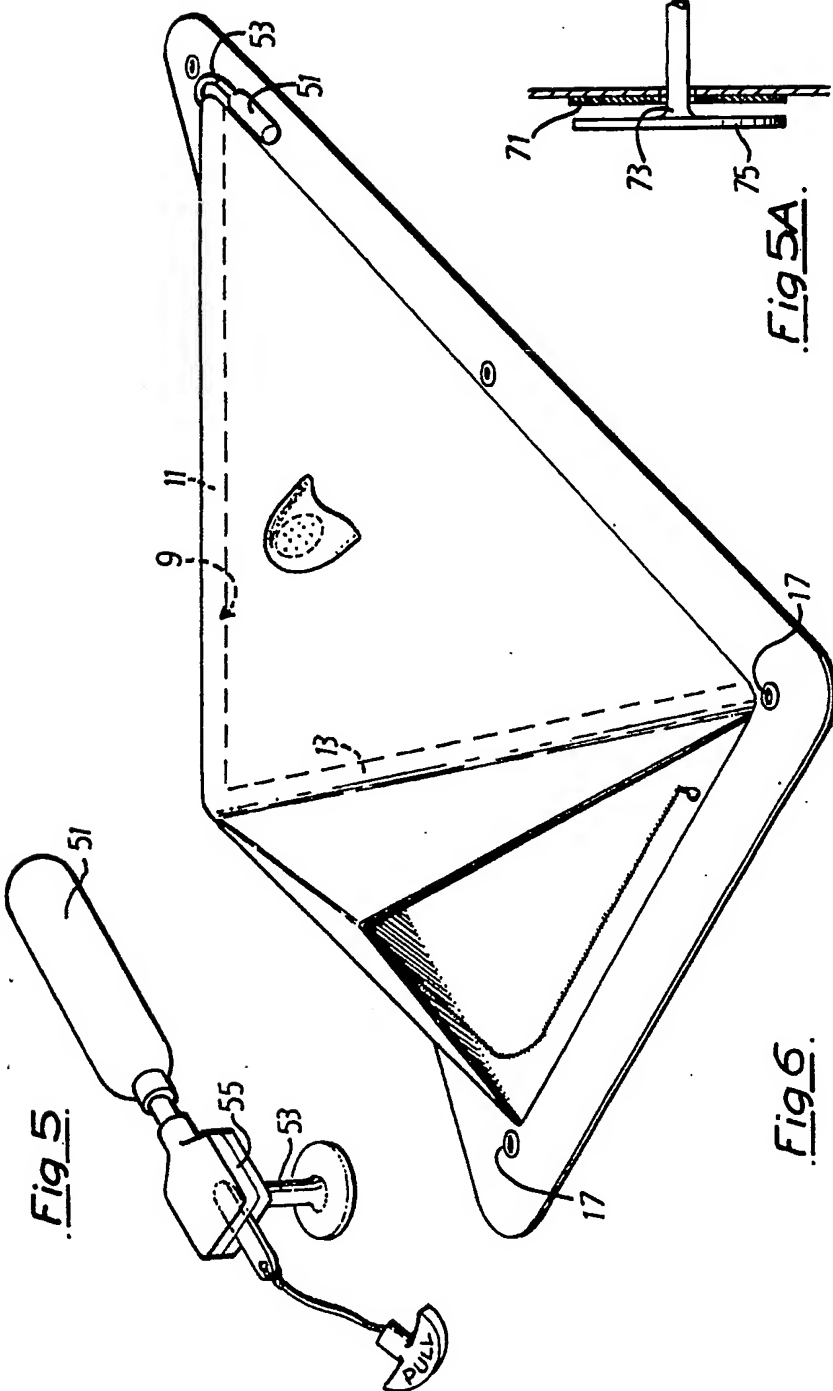
GB 2 090 622 A

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

1/3



2/3



3/3

Fig 7.

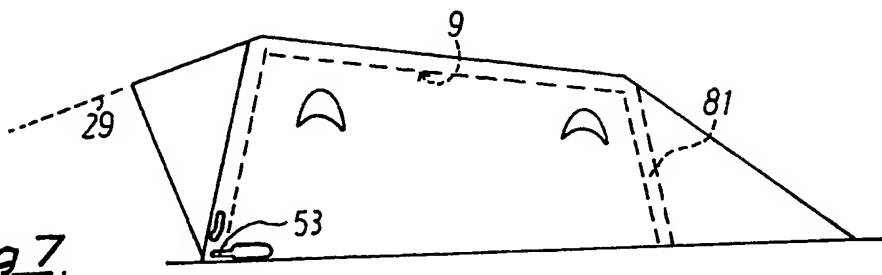


Fig 8.

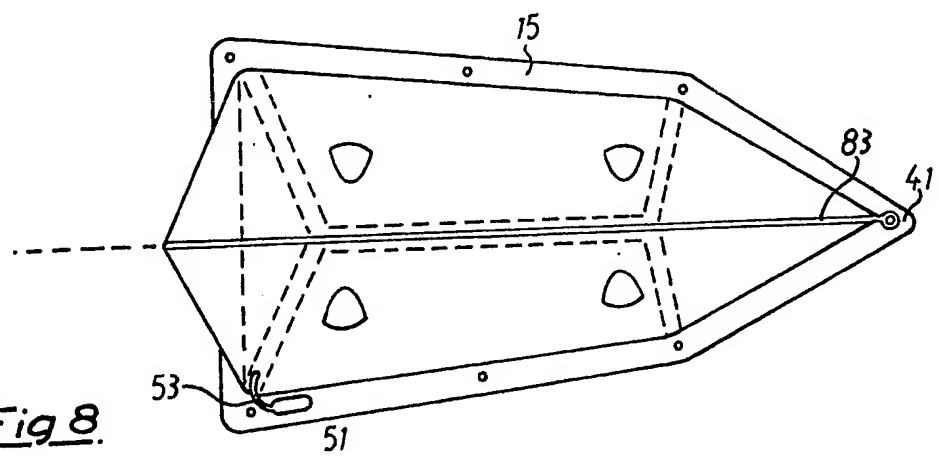


Fig 9.

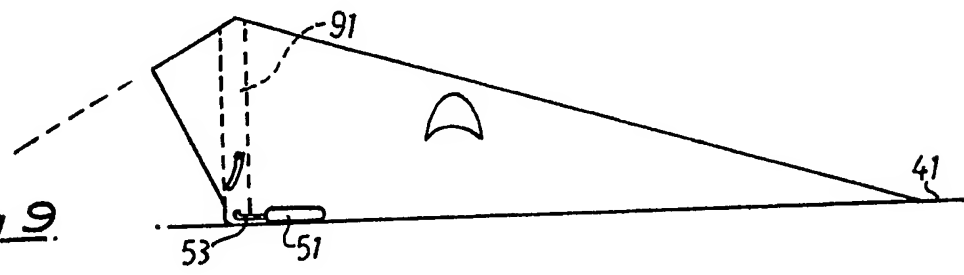
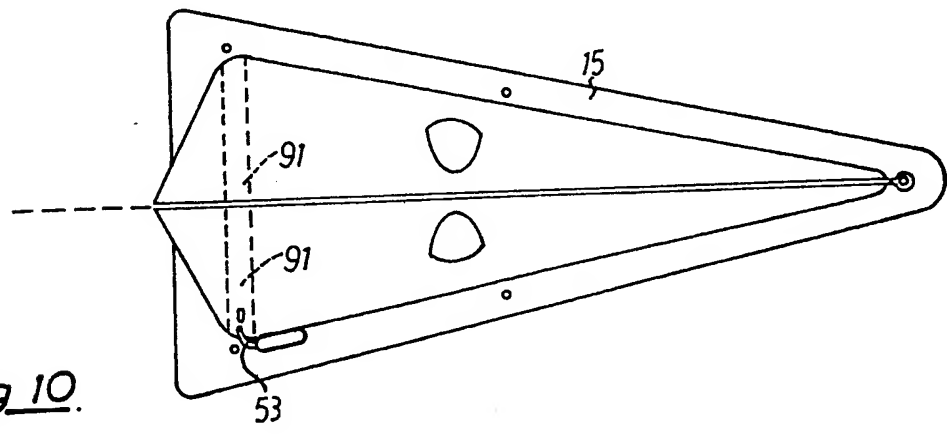


Fig 10.



SPECIFICATION

Emergency tent

The present invention relates to an emergency tent for use in inclement weather conditions.

5 A matter of increasing concern in recent years has been the protection of people such as walkers in the countryside, mountaineers and people on adventure courses should they suddenly be caught in inclement weather, since several have been
10 known to die from exposure in such a situation.

A conventional tent once erected would, generally at least, provide adequate protection, but it is subject to unacceptable disadvantages otherwise viz: it is costly, and it is not easily
15 erected in high winds or in the dark.

Conventional forms of sleeping bag overcome some of these disadvantages, but do not give adequate protection by themselves. They are also more difficult for rescuers to locate than a tent
20 would be.

It is an object of the present invention to provide an emergency tent which overcomes the disadvantages of both conventional tents and conventional sleeping bags for the present
25 purposes.

In accordance with the present invention, there is provided an emergency ground tent for use in inclement weather conditions, comprising a
30 groundsheet integrally connected to a plurality of wall-forming portions, an elongate inflatable beam member formed as an integral part of the tent structure and which, when inflated, causes the tent walls to adopt an erected position relative to the groundsheet, and means enabling the
35 groundsheet to be pegged to the ground or to be weighted down, e.g. with rocks or stones, should the ground be unreceptive to pegs.

Such a tent does not require tent poles or guy ropes merely to enable it to be erected and, once
40 erected, it can be secured by pegging and a minimal use of guy ropes.

Further, since it is intended as an emergency tent, it can be made of a cheaper material than a tent for repeated use, for instance, of polythene
45 sheet. Making it of such a material also simplifies its manufacture.

The tent may be provided for use in a compact folded form; and it may be packed to contain within it a so-called "thermal" blanket and food
50 rations.

Preferably, it is also packed with a gas cylinder e.g. of carbon dioxide, connected to the inflatable member by a valve so that the member can be inflated from the cylinder. Cylinders of a gross
55 weight of 33 gm to 120 gm according to tent size will generally provide an adequate amount of gas. It is also preferred, however, additionally to make provision for manual inflation of the member, for example by means of a separate oral tube
60 containing a non-return valve.

The present invention will now be described, by way of example only, with reference to the accompanying drawings in which like parts are indicated by the same reference characters and in

65 which:—

Figure 1 shows a first embodiment of a tent in accordance with the invention, in a folded condition;

70 Figure 2 is a side elevation of the tent of Figure 1 in its erected condition;

Figure 3 is a plan view of the erected tent of Figure 2;

Figure 4 is a front elevation of the erected tent of Figure 2;

75 Figure 5 is a detail of the tent of Figures 1 to 4;

Figure 5A is a further detail of the tent of Figures 1 to 4;

Figure 6 is a perspective view of a second embodiment of a tent in accordance with the
80 present invention, in its erected condition;

Figure 7 is a side elevation of a third embodiment of a tent in accordance with the invention, in its erected condition;

85 Figure 8 is a plan view of the erected tent of Figure 7;

Figure 9 is a side elevation of a fourth embodiment of a tent in accordance with the present invention, in its erected condition; and

90 Figure 10 is a plan view of the erected tent of Figure 9.

Referring to Figures 1 to 5, the tent comprises a groundsheet 3 to which are secured to form an integral structure, lateral walls 5 and a front wall 7 supported by a hollow inflatable member 9
95 comprising a leg 11 forming a ridge in the roof of the tent at which the lateral walls 5 join at their top ends, and a pair of backwardly inclined splayed legs 13 extending from the front end of the ridge to respective corners at the front end of
100 the tent to delineate the extent of the front wall 7.

The leg 11 comprises an angled portion 11a to increase the height available adjacent the rear end of the tent and, at the junction of the portion 11a with the remainder 11b of the leg, a "D" ring 42 is
105 secured to the structure to serve as an anchorage for each of two guy ropes 27.

The member 9 can comprise flexible hollow tubing attached to the material of the walls 5, 7 or it can be formed as an elongate pocket utilising
110 the material of the walls 5, 7 to complete an elongate air tight structure.

The lateral walls and the front wall are attached to the groundsheet to leave a peripheral flap 15 carrying a plurality of eyelets 17 to permit tent
115 pegs to be driven therethrough into the ground to secure the tent in place.

Each lateral wall is formed with a covered vent 21, and the front wall, in a triangular portion at the top thereof, is also provided with a vent 23
120 protected by a canopy 25 integral with the tent structure and to which is secured one end of a further guy rope 29.

The front wall comprises a zip fastener 31 by which a part 33 forming a flap may be unfastened
125 to permit access to and from the tent interior.

The tent is produced ready for use in a folded condition as shown by the sketch of Figure 1.

In this condition the flap portion 41 at the rear end of the tent is left on the outside of the folded

structure.

When the tent is to be erected, the folded structure is placed on the ground with the flap portion 41 uppermost, and that portion is drawn clear so that it may be pegged to the ground. The remaining part of the structure is then unfolded from underneath the flap portion 41 in the direction from the rear to the front of the tent so as to expose the remainder of the flap 15 which is then also pegged to the ground. Thereupon, the member 9 may be inflated to raise the tent. Securing of the tent is then completed by pegging the guy ropes.

Inflation of the member 9, in this instance, is effected from a cylinder 51 of carbon dioxide secured in a pocket of the flap 15 adjacent the portion 41 thereof, and connected to the hollow interior of member 9 by a flexible tube 53. The cylinder 51 has a manually operable "pull" valve 55 to permit release of the gas into the tube 53 and thus into the member 9. Any number of such gas cylinders 57 may be provided, as required.

A separate tube 59 may be provided comprising a non-return valve protected by a cap, to permit the user manually to inflate the tent should the need arise.

As a convenient housing for the pegs, the flap may carry a series of adjacent pockets 63 each to house one of the pegs.

The tent material may, for example, be a "soft" polyethylene of 0.010" gauge, preferably dyed in fluorescent international orange, and all seams may be electronically welded.

The internal kit, prepacked within the tent, may comprise a "space" thermal blanket and a ration pack e.g. a one man, 2 to 3 day survival ration pack.

To provide a secure mounting of the respective end of the tube 53 and tube 59 to the member 9, a patch of nylon 71 (see Fig. 5A) may be laminated to the interior surface of the member 9 around the entry of each tube into the member, and the respective end 73 of the tube terminated in radial flange 75 of a material which can be securely adhered to the nylon patch. The nylon patch may be laminated by a facing of PVC, the PVC facing being welded to the interior surface of the member.

The tent shown in Figure 6 is very similar to that of Figures 1 to 5, but the leg 11 of member 9 provides a straight ridge and the guy ropes 27 are dispensed with, thus making erection even simpler.

The tent of Figures 7 and 8, differs from that of Figures 1 to 5, in that the member 9 also terminates at its rear end in splayed legs 81, indicated in outline and in this instance inclined forwardly, to provide a greater lateral stability than that provided by the angled portion 11a of Figures 1 to 5, but the guy ropes 27 are again dispensed with. Further, to strengthen the tent against tensional forces induced by the guy ropes 29, the join of the lateral walls along the entire length thereof and the longitudinal central portion of the canopy are taped with a tape 83 which, at the

rear, extends over the flap portion 41 and supports the respective eyelet to provide a firm anchorage for the tape when that eyelet is pegged. Also, the tube 53 is connected to the bottom of one of the front splayed legs rather than to the tail end of the angled portion 11a. Otherwise, however, the tent has substantially the same structure as that of Figures 1 to 5.

The tent of Figures 9 and 10 also modifies the support member 9 which, in this instance, comprises solely a pair of splayed legs 91 delineating the extent of the front wall and intended to lie vertically erect rather than inclined backwardly. One of the legs at the bottom thereof receives the tube 53. The rear guy ropes again are dispensed with, but, as in the embodiment of Figures 7 and 8, the join of the lateral walls and the longitudinal central portion of the canopy are taped in the same manner as in Figures 7 and 8.

In other embodiments, the relative dimensions of the various walls may be altered from those illustrated. Other forms of ventilator flap arrangements can be used as desired.

In a further modification, the front wall 7 can be formed as a triangular continuation of the groundsheet 3 which has eyelets in its two upwardly extending sides which can be secured to corresponding eyelets around the adjacent edges of the tent by means of suitable tapes or strings.

95 CLAIMS

1. An emergency ground tent for use in inclement weather conditions, comprising a groundsheet integrally connected to a plurality of wall-forming portions, an elongate inflatable beam member formed as an integral part of the tent structure and which, when inflated, causes the tent walls to adopt an erected position relative to the groundsheet, and means enabling the groundsheet to be pegged to the ground or to be weighted down, e.g. with rocks or stones, should the ground be unreceptive to pegs.

2. A tent as claimed in claim 1 including guy rope support to resist displacement of said inflatable member when the tent is erected and pegged or weighted down.

3. A tent as claimed in claim 1 or 2, wherein, when inflated, said inflatable member defines a roof ridge extending generally longitudinally of the tent and has a pair of splayed leg portions at one end thereof which delineate a front wall of the tent through which entrance is gained to the tent interior.

4. A tent as claimed in claim 3, wherein said ridge is straight over the majority of its length but contains a kink leading to a steeply angled portion at its end remote from said splayed leg portions, said steeply angled portion being to increase the internal height of the tent at its rear end remote from said front wall.

5. A tent as claimed in claim 3, wherein said ridge is straight over the whole of its length and slopes downwardly from its point of connection with said splayed portions to reach the groundsheet at the rear end of the tent remote

from said front wall.

6. A tent as claimed in claim 3, wherein, in addition to said splayed leg portions at said one end of the tent, the inflatable member has a

5 second pair of splayed leg portions at the other end thereof for defining a rear end of the tent.

7. A tent as claimed in any of claims 1 to 6, wherein the ground sheet forms a skirt portion extending outwardly around the base of said wall-

10 forming portions, the skirt containing holes through which pegs may be passed to the ground beneath, the skirt being dimensioned to enable it to be anchored to the ground by placing rocks and stones thereon in the event that the ground is

15 unsuitable for pegging.

8. A tent as claimed in claim 7, including one or more gas cylinders coupled to said inflatable

member.

9. A tent as claimed in claim 8, in which the or 20 each gas cylinder is carried in a pocket in said skirt portion.

10. A tent as claimed in any of claims 1 to 9, including a tube and valve arrangement coupled to said inflatable member by way of which the 25 member can be inflated manually.

11. A tent as claimed in any of claims 1 to 10, made of a cheap plastics material, such as polythene.

12. An emergency ground tent substantially as 30 hereinbefore described with reference to and as illustrated in Figs. 1 to 5; or in Fig. 6; or in Figs. 7 and 8; or in Figs. 9 and 10 of the accompanying drawings.